

Amendments to the Claims:

1. (Currently Amended) A method of isolating nucleic acid and protein from each other in a sample, said method comprising:

providing a sample that comprises nucleic acid components and protein components;

contacting said sample with a plurality of first magnetic, particulate solid supports wherein nucleic acid components contained in said sample become bound bind to the plurality of first particulate solid supports in a sequence independent manner;

contacting the sample with a plurality of second magnetic particulate solid supports distinct from the first particulate solid supports, wherein and protein components contained in said the sample become bound bind to the plurality of second particulate solid supports by effecting through a chromatographic interaction, wherein the solid supports to which nucleic acids components are bound are distinct from the solid supports to which protein components are bound, and wherein the solid support are in the form of magnetic particles; and

separating the plurality of first particulate solid supports to which are bound nucleic acid components and the second plurality of particulate solid supports to which are bound protein components from unbound components in the sample.

2. (Currently Amended) The method of claim 1, wherein the method comprises providing a sample that contains DNA and RNA components, and further comprises binding wherein both DNA and RNA are bound components to the plurality of first particulate same-solid supports.

3. (Currently Amended) The method of claim 1, wherein the method comprises providing a sample that contains RNA components, and further comprises contacting the sample with a plurality of third particulate solid supports, wherein the first, second and third particulate solid supports are distinct, and wherein RNA components bind to the plurality of third particulate solid supports wherein DNA and RNA are bound to distinct solid supports.

4. (Currently Amended) The method of claim 3, further comprising contacting the sample with the plurality of first and third wherein-DNA and RNA particulate solid supports are bound to different solid supports in separate steps.

5. (Currently Amended) The method of claim 1, wherein the method comprises isolating

nucleic acid and protein components wherein RNA and protein, or DNA and protein, or DNA, RNA and protein are isolated from the same sample.

6. (Currently Amended) The method of claim 1[[5]], wherein the method comprises providing a sample containing wherein said RNA is mRNA.

7. (Currently Amended) The method of claim 1[[5]], wherein the method comprises providing a sample containing wherein said DNA is genomic DNA.

8. (Currently Amended) The method of claim 1, wherein the method comprises isolating wherein the total RNA and/or the total DNA from the sample is isolated.

9. (Currently Amended) The method of claim 1, wherein the method comprises isolating wherein the total nucleic acid component from the sample is isolated.

10. (Currently Amended) The method of claim 1, wherein the method comprises isolating wherein the total protein component from the sample is isolated.

11. (Currently Amended) The method of claim 1, further comprising providing a wherein said sample selected from [[is]] a food or allied product, [[or is]] and a clinical, environmental or biological sample.

12. (Currently Amended) The method of claim 1, further comprising subjecting the wherein prior to contacting said sample with said solid supports, the sample is subjected to a preliminary treatment step to free the nucleic acid and/or protein components from structures or entities in which they may be contained.

13. (Currently Amended) The method of claim 1, further comprising providing a sample that comprises one or more cell populations, and subjecting the sample to a cell isolation procedure wherein prior to contacting said sample with said plurality of first and second particulate solid supports, the sample is subjected to a cell isolation procedure.

14. (Currently Amended) The method of claim 13, further comprising separately isolating

wherein one or more particular cell populations from the sample are specifically isolated.

15. (Currently Amended) The method of claim 1 or claim 13, further comprising subjecting wherein the sample, or a cell population isolated therefrom, is subjected to a cell lysis step prior to contacting said sample with said first plurality of solid particulate supports.

16. (Currently Amended) The method of claim 15, further comprising subjecting the wherein cell surface proteins of cells within or isolated from said sample are subjected to an in vitro modification procedure prior to the cell lysis step.

17. (Previously Presented) The method of claim 1, wherein the sample is not divided at any stage of the method.

18. (Currently Amended) The method of claim 1, wherein the sample further comprising conducting a cell isolation, lysis, or preliminary treatment step conducted prior to contacting the sample with the plurality of first particulate solid supports, and dividing the sample after the cell isolation, lysis, and/or preliminary treatment step is divided after cell isolation and/or lysis or after said preliminary treatment step.

19. (Previously Presented) The method of claim 1, wherein said sample is contacted with said solid supports sequentially or simultaneously or in parallel.

20. (Original) The method of claim 19, wherein in a first step DNA is isolated from said sample, in a second step RNA is isolated from said sample and in a third step, protein is isolated from said sample, and wherein said steps may be performed in any order.

21. (Currently Amended) The method of claim 1, further comprising isolating wherein-DNA components is isolated on a plurality of first particulate solid supports selected from supports carrying surface carboxyl or hydroxyl groups, silica or silica-based supports, and supports having a polyamine coated surface.

22. (Currently Amended) The method of claim 1, further comprising binding nucleic acid components from the sample to the plurality of first particulate solid supports wherein-DNA is

~~isolated by binding to a solid support, in the presence of a detergent.~~

23. (Currently Amended) The method claim [[13]]15, further comprising subjecting the sample to a cell lysis step, wherein cell lysis and nucleic acid or DNA binding to [[a]] the plurality of first particulate solid supports occur simultaneously or concomitantly.

24. (Currently Amended) The method of claim [[1]]3, further comprising isolating wherein RNA is isolated components from the sample using an RNA-specified capture-probe carried by or attached to, or capable of binding to said plurality of first particulate solid supports.

25. (Currently Amended) The method of claim 24, wherein said capture probe is or comprises [[of]] adT oligonucleotide or dU oligonucleotide.

26-33. (Canceled)

34. (New) The method of claim 1, further comprising providing a plurality of first particulate solid supports having a positive or negative surface charge.

35. (New) The method of claim 1, further comprising contacting the sample with the plurality of first particulate solid supports in the presence of a plurality of solid particles, wherein the plurality of first particulate solid supports and the plurality of solid particles are of different size.

36. (New) The method of claim 15 or 23, further comprising lysing the sample in the presence of a plurality of solid particles capable of binding cells, wherein the plurality of solid particles and the plurality of first particulate solid supports are of different size.